Title (en)

ELECTRONIC DEVICES AND SYSTEMS, AND METHODS FOR MAKING AND USING THE SAME

Title (de)

ELEKTRONISCHE VORRICHTUNG SOWIE SYSTEME UND VERFAHREN ZU IHRER HERSTELLUNG UND VERWENDUNG

Title (fr)

DISPOSITIFS ET SYSTÈMES ÉLECTRONIQUES, ET PROCÉDÉS DE FABRICATION ET D'UTILISATION ASSOCIÉS

Publication

EP 2483915 B1 20190612 (EN)

Application

EP 10821022 A 20100915

Priority

- US 24730009 P 20090930
- US 70849710 A 20100218
- US 26212209 P 20091117
- US 2010049000 W 20100915

Abstract (en)

[origin: WO2011041109A1] A system and method to reduce power consumption in electronic devices is disclosed. The structures and methods can be implemented largely by reusing bulk CMOS process flows and manufacturing technology. The structures and methods relate to a Deeply Depleted Channel (DDC) design, allowing CMOS based devices to have a reduced sigma VT compared to conventional bulk CMOS and can allow the threshold voltage VT of FETs having dopants in the channel region to be set more precisely. The DDC design also has a strong body effect compared to conventional bulk CMOS transistors, which can allow for significant dynamic control of power consumption.

IPC 8 full level

H01L 21/8238 (2006.01); **H01L 21/8234** (2006.01); **H01L 21/84** (2006.01); **H01L 27/02** (2006.01); **H01L 27/092** (2006.01); **H01L 29/10** (2006.01); **H01L 29/66** (2006.01); **H01L 29/78** (2006.01); **H01L 29/786** (2006.01); **H10B 10/00** (2023.01)

CPC (source: EP KR)

H01L 21/823412 (2013.01 - EP KR); **H01L 21/823493** (2013.01 - EP KR); **H01L 21/84** (2013.01 - KR); **H01L 27/0207** (2013.01 - KR); **H01L 29/105** (2013.01 - EP KR); **H01L 29/1079** (2013.01 - EP KR); **H01L 29/66545** (2013.01 - EP KR); **H01L 29/66628** (2013.01 - EP KR); **H01L 29/7834** (2013.01 - EP KR); **H10B 10/00** (2023.02 - EP KR); **H10B 10/12** (2023.02 - EP KR); H01L 21/84 (2013.01 - EP); H01L 27/0207 (2013.01 - EP)

Cited by

US11411087B2

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

WO 2011041109 A1 20110407; CN 102640269 A 20120815; CN 102640269 B 20150812; CN 102640274 A 20120815; CN 102640274 B 20160511; EP 2483915 A1 20120808; EP 2483915 A4 20150701; EP 2483915 B1 20190612; EP 2483916 A1 20120808; EP 2483916 A4 20150701; EP 2483916 B1 20190612; JP 2013507000 A 20130228; JP 2013507001 A 20130228; JP 2015213200 A 20151126; JP 2017055140 A 20170316; JP 5829611 B2 20151209; JP 6170528 B2 20170726; JP 6371823 B2 20180808; KR 101746246 B1 20170612; KR 101757007 B1 20170726; KR 20120081173 A 20120718; KR 20120081174 A 20120718; TW 201133849 A 20111001; TW I545758 B 20160811; WO 2011041110 A1 20110407

DOCDB simple family (application)

US 2010048998 W 20100915; CN 201080054378 A 20100915; CN 201080054379 A 20100915; EP 10821021 A 20100915; EP 10821022 A 20100915; JP 2012532104 A 20100915; JP 2012532105 A 20100915; JP 2015162854 A 20150820; JP 2016244655 A 20161216; KR 20127011008 A 20100915; KR 20127011021 A 20100915; TW 99132985 A 20100929; US 2010049000 W 20100915